2020-2021 Antelope Hunting Seasons and Quota Range Justifications

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Antelope

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Antelope
Region: 2
Hunting District: 215

Year: 2020

1. **Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).**

   It is proposed to:

   - Reduce the 215-30 doe/fawn antelope permit to 10
   - Remove second opportunity from the 215-30 permit
   - Reduce the 215-20 either sex antelope permit to 5

2. **What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.**

Objectives are to:

- Allow antelope populations to recover from hard winters of 2017 and 2018.
- Offer maximum hunter opportunity

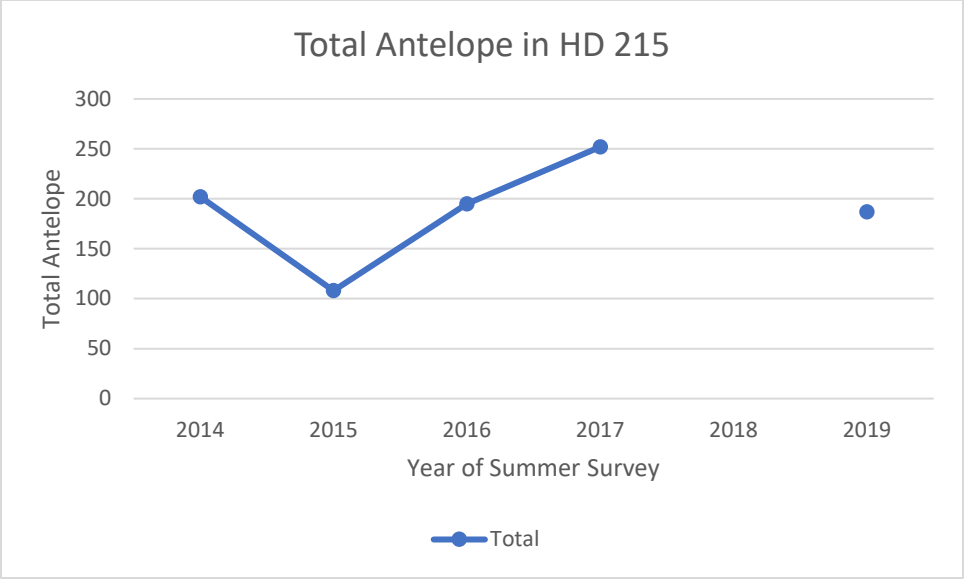
3. **How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.**

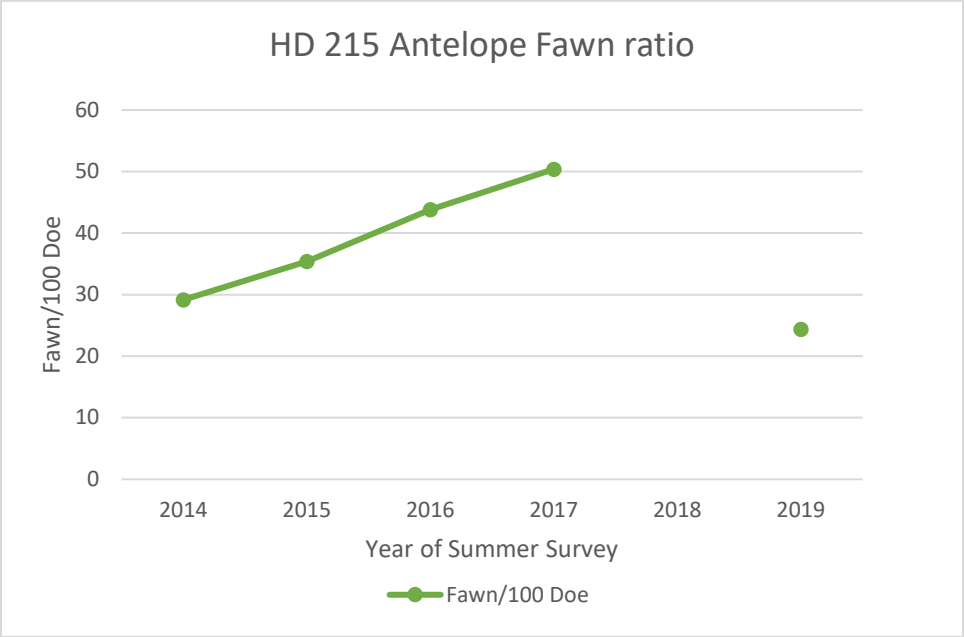
The success of this proposal will be measured by:

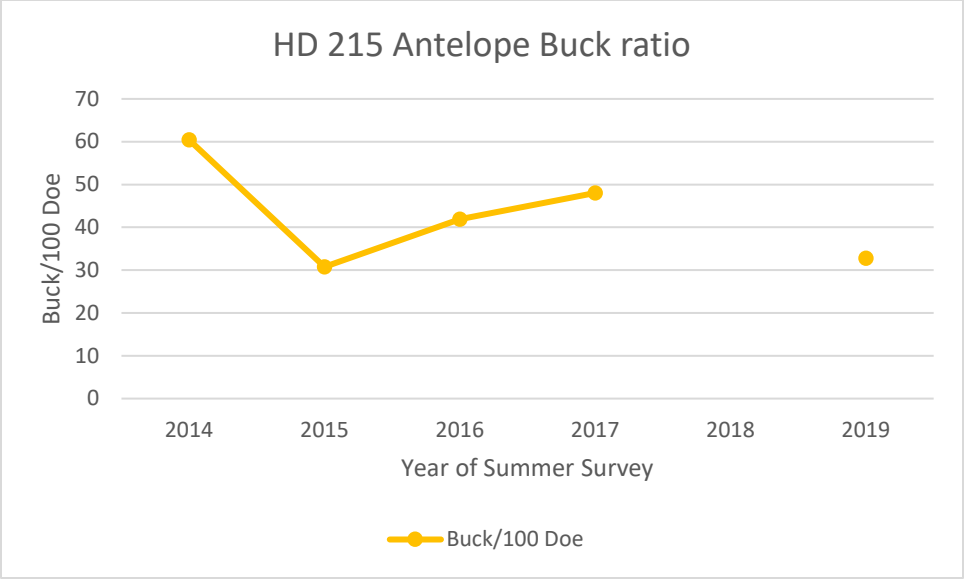
- Harvest will be measured by annual hunter survey harvest estimates.
- Antelope populations will be measured during annual summer surveys.

4. **What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

   Antelope population trends are all in decline in HD 215.


Total Antelope in HD 215
300
250
200
150
100
50
0
Total Antelope
2014
2015
2016
2017
2018
2019
Year of Summer Survey
Total


HD 215 Antelope Fawn ratio
60
50
40
30
20
10
0
Fawn/100 Doe
2014
2015
2016
2017
2018
2019
Year of Summer Survey
Fawn/100 Doe



5. **Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).**

   Antelope are sensitive to harsh winters, and the heavy snow in the valley bottoms of HD 215 have impacted the fawn survival and recruitment for two winters in a row. Antelope are mostly harvested off of private land in HD 215, though some can be hunted on FWP WMAs or public lands during parts of the hunting season.

6. **Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).**

   Landowners in HD 215 have little input on antelope populations, other than confirming seeing less antelope this year than previously.

   Sportsmen enjoy the opportunity to hunt antelope in HD 215, as it and HD 291 are the closest location to do so for sportsmen from southwest Montana. Seeing a reduction in hunting opportunity will be disappointing for these sportsmen.

Submitted by: Julie Golla
Date: November 20, 2019

Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date

Reason for Modification:

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Pronghorn
Region: 3
Hunting District: 311
Year: 2020-2021

7. **Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).**
   This proposal would remove the HD 311-30 doe-fawn license (currently at 25) and would introduce a wider quota range (75 to 300) for the HD 311-20 either-sex license (currently at 150-350). The proposal would not change the current quota for either-sex license (150) for the 2020 hunting season.

   From 1960 to 2005, the number of either-sex licenses generally varied from 40 to 150, with a period in the late 1980s when either-sex licenses were fewer (50) and doe-fawn licenses greater (up to 100). By 2005, the pronghorn population had increased and, according to the biologist at the time, a highway fencing project trapped pronghorn on the west side of a highway on private land causing game damage problems. The biologist sought to relieve game damage through establishing a doe-fawn license (up to 250) and increasing the either-sex quota (up to 250). His goal was to maintain counts at long-term average.

   From 2005-present, the current biologist has noted the liberalized hunting has clearly contributed to population regulation, meeting the objective of the 2005 season. Despite operating at current quota-range minimum (150 either-sex licenses + 25 doe-fawn licenses) since 2014, the population counts have not increased and hunter success is lower, on average, than desired for a pronghorn hunting unit.

8. **What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.**
   The objective of this change is to raise pronghorn numbers to an average of 500 (+/- 100). This figure approximates the ideal balance between high populations with low game damage complaints. Landowner complaints occur when the population is over about 600. When the population is close to 500, hunter harvest can be maximized without seeing significant numbers of complaints from landowners.

9. **How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.**
   The success of this proposal will be measured through the next several years of pronghorn counts, which occur annually in July or August. If weather conditions are favorable, pronghorn populations may be expected to increase in 3-6 years. If weather conditions are not favorable, further reductions in hunting opportunity may be needed until populations respond.

10. **What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

HD 311 is large, over 2,300mi^2, about half of which is habitable for pronghorn. Although no explicit objective has ever been written for this pronghorn herd, experience suggests if counts exceed 600 pronghorn, landowner complaints will arise. A possible objective would be 500 pronghorn (+/- 100) which would balance the maximum number of pronghorn available on the landscape and for hunting opportunity while minimizing local landowner complaints. Even at this low level, it is important to note that pronghorn are herd animals, and localized concentrations may occur resulting in game damage. In these cases, game damage hunts may help defray damage on local levels while maintaining robust population counts on the district level.

Population counts (Figure 1) show evidence this kind of cycle has happened before. In the late 1980s when counts crept above 600 pronghorn, MFWP introduced a season where up to 100 doe-fawn licenses were issued. When the population regulated by the 1990s, the population was maintained by moderate to liberal numbers of either-sex licenses only, depending on annual conditions, with no doe-fawn opportunity. From 2005 through about 2010-2011, pronghorn numbers were high and game damage complaints numerous. Liberal doe-fawn licenses were issued (200-250) and the population regulated again. As of 2019, we are back in a cycle where the population can be regulated through either-sex licenses only. When/if counts return to 500+, the doe-fawn license should be reintroduced.

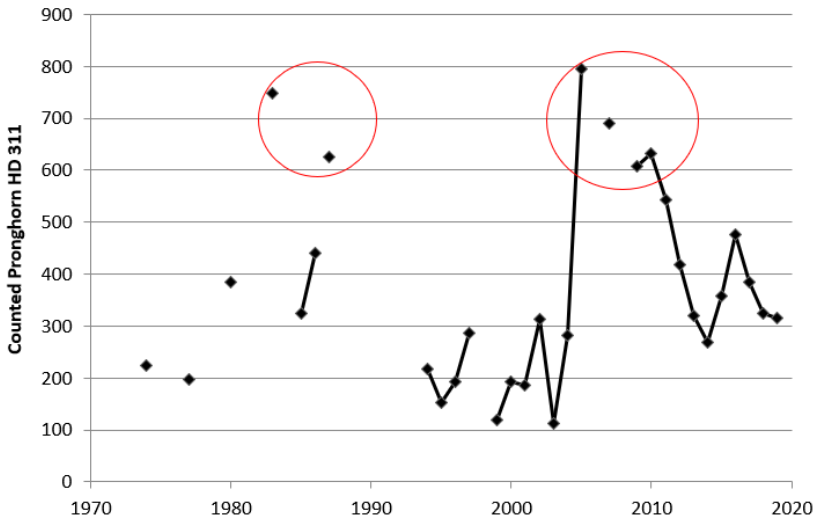


Figure 1: Graph of pronghorn counted in HD 311 from 1970 to present. Circled high points represent time periods when game damage complaints were numerous enough MFWP liberalized the hunting season structure to include moderate numbers of doe-fawn licenses.

Hunting harvest surveys indicate declining success on the either-sex licenses. From 2004-2012, average success was 58% (max = 65%, min =35%), which is approximately expectation, and the same as adjacent district 360. However, from 2013-2019, average success declined to 43% (max = 49%, min = 38%). On the doe-fawn license, introduced in 2006, success rates average 36% with no apparent trend, which compares to an average success rate of 69% success in adjacent HD 360.

11. **Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).**
Pronghorn suffered from severe drought conditions in 2012 and several difficult winter and spring seasons. Several deaths have occurred in recent years due to peritonitis, disease, and ulcers from

pronghorn getting into forage too rich for their digestive systems to process. Weather conditions on summer and winter range will influence pronghorn populations.

12. **Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).** This proposal was vetted through flight reports and through dedicated communications to more than 200 sportsmen and women, agency personnel, NGOs, and landowners. No comments have been received back.

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Antelope
Region: 3
Hunting District: 318 and 329 (new)
Year: 2020

1. **Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.). REMEMBER THIS STEP IS TO BE ACCOMPLISHED BY THE INITIAL ENTRY INTO THE DATABASE—SO FOLKS CAN START THIS NARRATIVE WITH #2 BELOW.**

Reestablish antelope HD 329, following the 2006 legal descriptions, with editorial amendments.

318-20 Either Sex Quota: 175, Quota Range 50-350
318-30 Doe/Fawn Quota: 125, Quota Range 50-350

329-20 Either Sex Quota: 100, Quota Range 50-300

HD 318-Big Hole-Those portions of Beaverhead and Deer Lodge Counties lying within the following-described boundary: Beginning at Wise River, then southerly along the Wise River Scenic Byway (Route 73) to its junction with Route 278, then west along said route to Jackson, then south and west along the Jackson-Skinner Meadows Road to the Big Hole-Bloody Dick Divide, then westerly along said divide to the Montana-Idaho border and Continental Divide, then northerly and northeasterly along said divide to its junction with Route 569 (Mill Creek Road), then southerly along said route to its junction with Route 43, then southeasterly along said route to Wise River, the point of beginning.

HD 329-Horse Prairie North-That portion of Beaverhead County lying within the following-described boundary: Beginning at Clark Canyon Dam, then westerly along Route 324 to the Trail Creek-Lemhi Pass Road, then westerly along said road to the Montana-Idaho border at Lemhi Pass, then northerly along said border to the Bloody Dick-Big Hole Divide, then easterly along said divide to the Skinner Meadows-Jackson Road, then northerly along said road to Route 278, then easterly along said route to the Bannack-Grant Road, then southerly along said road to Grasshopper Creek, then easterly along said creek to Interstate 15, then southerly along said interstate to Clark Canyon Dam, the point of beginning.

2. **What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.**

The objective of this proposal is to restore balance and distribution to antelope harvest. HD 318 was created in 2007 by combining the Big Hole and Bachelor Mountain (HD 329) districts. The goal was to manage the antelope population as a single unit. Antelope are highly migratory and summer in the Big Hole and return to the Grasshopper Valley and Bannack Bench to winter. Public access to antelope is far greater on the southern end of the district and it has become apparent that the resident or non-migratory segment of the

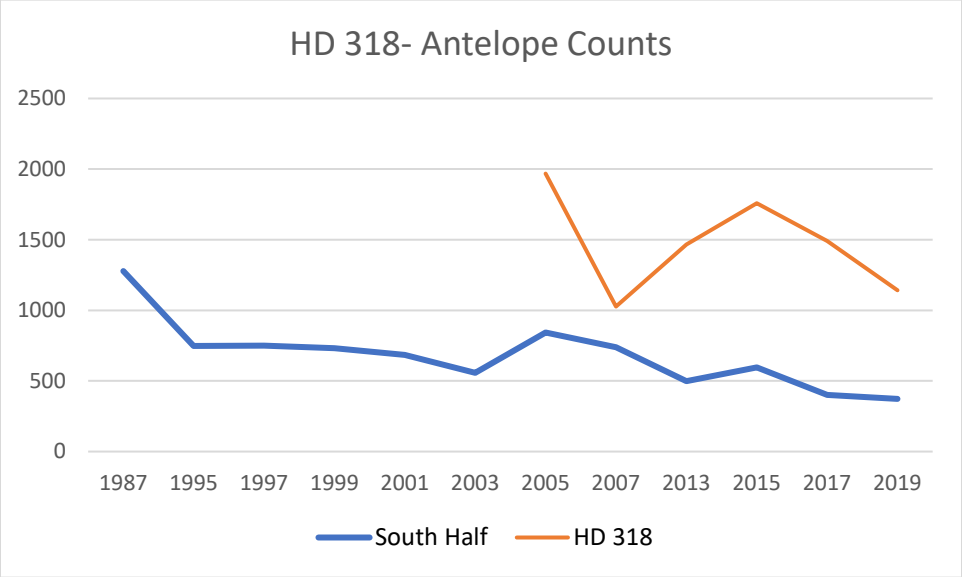
population in the southern end of HD 318 has been diminished through excessive harvest pressure. The situation was likely exacerbated by mild falls that delayed migration past the end of the antelope the last 3 years.

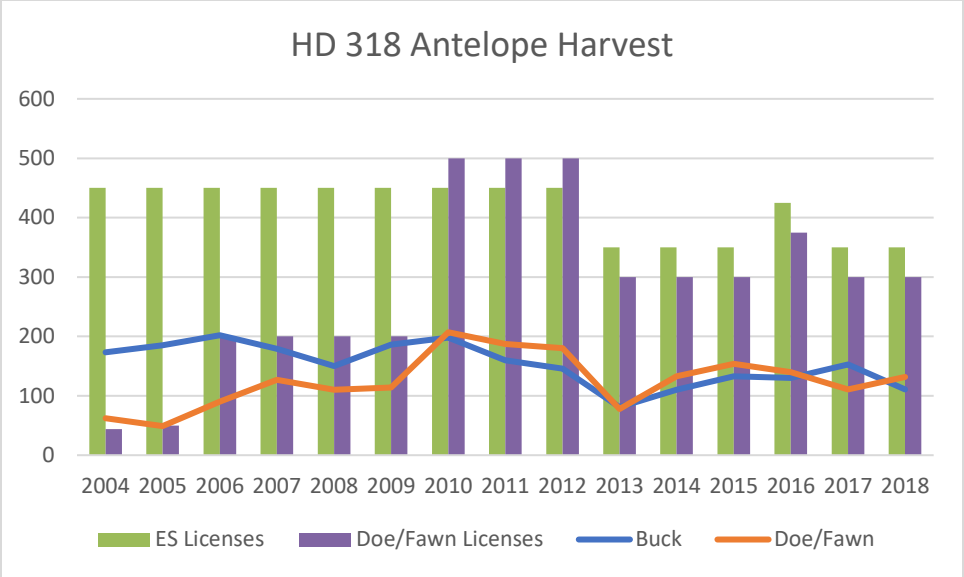
3. **How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.**

The success of the proposal will be measured through annual harvest surveys, biennial population surveys and contact with individual sportsmen and landowners. There have been no antelope game damage complaints in the districts since 2005.

4. **What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

The population objective is to maintain about 1500 antelope in the districts combined. HD 329 and that portion of HD 318 in the Grasshopper Valley can support at least 500 antelope. The last comprehensive survey showed antelope numbers falling below 500 in the south half of HD 318 and exceptionally low fawn production at 27:100 does.





5. **Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).**

A Big Hole antelope migration study is scheduled to begin in late 2019/early 2020. This study will provide information regarding both migratory and resident segments of the antelope population as antelope will be captured on winter range in the proposed HD 329.

6. **Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).**

FWP wildlife and enforcement staff, several landowners and numerous sportsmen have noted a decline in antelope numbers in the south half of HD 318.

Submitted by: Craig Fager and Vanna Boccadori
Date: October 10, 2019
Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date
Reason for Modification:

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Antelope
Region: 3
Hunting Districts: 341, 350 and 370

2020-2021 Antelope Hunting Seasons and Quota Range Justifications

Year: 2020-2021

1. **Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).**
   Set quota ranges for 2nd opportunity antelope B licenses for Hunting Districts 341, 350 and 370 as follows:
   HD 341: 50-500
   HD 350: 25-250
   HD 370: 25-250

2. **What is the objective of this proposed change?**
   The objective is to set a reasonable range of B licenses that meet management needs.

3. **How will the success of this proposal be measured?**
   If I don't have to go back to the commission to get approval for a quota outside the ranges listed above.

4. **What is the current population's status in relation to the management objectives?**
   In each of these hunting districts, the antelope population is stable. Each population is managed by a combination of Either-sex licenses issued via the drawing and Doe/Fawn licenses offered as 2nd opportunities to Either-sex license holders in that district. The reason for this is that access could be limited so to be most efficient in harvest and to prevent overcrowding, each hunter can hold multiple tags for that district.

5. **Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).**
   N/A

6. **Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).**
   N/A

Submitted by: Vanna Boccadori
Date: 9/9/2019
Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date
Reason for Modification:

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Pronghorn
Region: 3
Hunting District: 360
Year: 2020-2021

1. **Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).**
   This proposal introduces a quota range (25 to 200) to an existing license type, the second opportunity 360-30 doe-fawn antelope license.

   Hunting by doe-fawn license first occurred briefly in the mid-1980s when 50 to 250 doe-fawn licenses were allocated in addition to separate either-sex licenses. Doe-fawn licenses were not used again until 2006, and then were introduced not as a stand-alone B license, but as a second-opportunity license type to hunters who successfully drew the either-sex license. In the Madison Valley, accessible lands can be over-crowded. Placing an additional +/- 100 hunters atop the 500 either-sex license holders would create further crowding challenges. This opportunity was viewed as a means to use hunting to regulate populations without increasing crowds on a limited landscape.

   The proposed quota range is 25 to 200, which is based on the observed variance in license allotment since this license type was introduced in 2006. This proposal does not change the license quota for 2020, which will remain at 25 (as proposed in 2019) until the population merits increasing the license again.

2. **What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.**
   The objective of this change is to formalize a quota range (25 to 200) to work within during annual quota range adjustment periods.

3. **How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.**
   This proposed quota range describes the realized variation in B license opportunity over the last 14 years and is expected to encompass the normal range of variation in the population from highs to lows, barring any unforeseen events. Annual population counts will inform the future potential for B license allocation.

4. **What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**
   Pronghorn in the Madison Valley were native but extirpated during early settlement. They were reintroduced in 1952, after which their populations increased to a plateau of approximately 1,200 pronghorn for many years 1971-2003. The populations increased to all-time highs of 2,000-2,200 pronghorn during 2004-2008. The highest count ever recorded was 2,480 in 2016.

   When pronghorn counts exceed about 1,600 in the Madison Valley (+/-200), game damage complaints increase notably. This could serve as a possible objective or population target to manage around for the future.

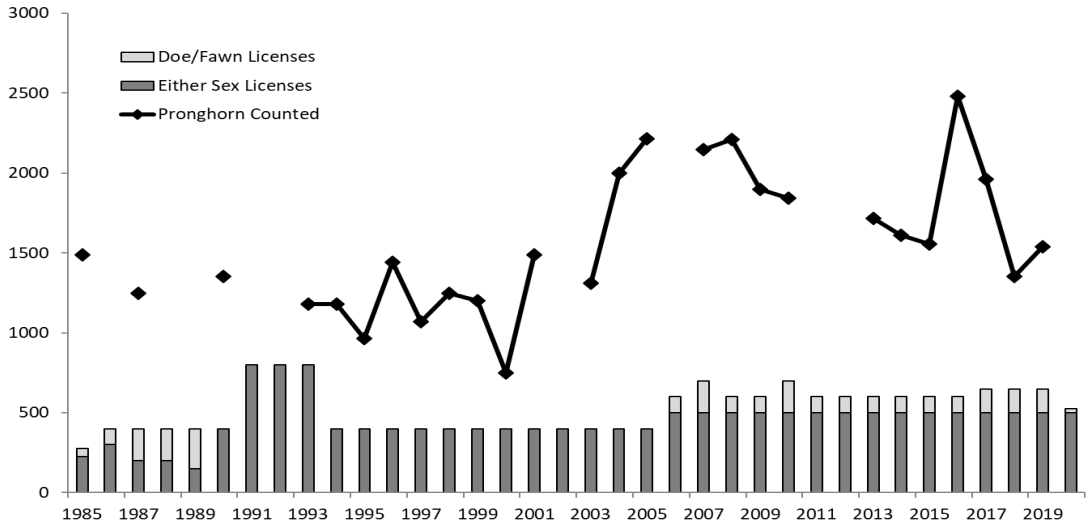


Figure 2: The number of pronghorn counted during annual spring/winter flight (black line) with the number of either-sex pronghorn licenses offered (dark grey) and number of doe-fawn licenses offered (light grey). Doe fawn licenses represented a second opportunity to either-sex license holders as of 2006 hunting season.

5. **Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).**
   Annual variation in drought, snowpack, and even disease can influence pronghorn production. They are prone to eruptive dynamics with the capability of readily producing twins when conditions merit. A recent pronghorn research project has started in the Madison Valley which is giving MFWP insights to the dynamics of the pronghorn herd. We have already learned there are herds that seem to rarely have interchange. Pronghorn on the west side and east side of the Valley rarely interchange, and pronghorn that are west of the Madison River have two herds, north and south of Varney Bridge. These data will be important to management into the future, as if game damage complaints erupt in a particular area, targeting that herd segment will be more productive than simply issuing more licenses across the entire hunting district.

6. **Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).**
   This proposal was vetted through flight reports and through dedicated communications to more than 200 sportsmen and women, agency personnel, NGOs, and landowners. No comments have been received back. The proposal is not expected to generate controversy as it does not make any change on-the-ground but simply introduces a formal range to an existing quota.

Submitted by: Julie Cunningham
Date: 10/11/2019
Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date
Reason for Modification:

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Antelope
Region: 4
Hunting District: 470
Year: 2020

1. **Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.). REMEMBER THIS STEP IS TO BE ACCOMPLISHED BY THE INITIAL ENTRY INTO THE DATABASE—SO FOLKS CAN START THIS NARRATIVE WITH #2 BELOW.**

Proposal is to remove LPTs 470-20 and 470-30 and combine current antelope HD 470 with HD 471.

2. **What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.**

Objective of the proposed change is to provide flexibility to hunters and improve antelope population and harvest management strategies for the antelope herd as populations fluctuate.

3. **How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.**

Success will be increased flexibility, increased hunter/harvest opportunity on larger landscapes, easier regulations and HD boundary descriptions. Population management should also be successful as currently antelope herds that fawn and summer in HD 470 move into HD 471 as winter progresses. As wintering antelope move out of HD 470 (sometimes during hunting seasons) antelope become unavailable to HD 470 license holders. About 1/3 to ½ the antelope in HD 470 move into HD 471 to winter. Combining the two HDs improves management of the overall herd as well.

HD 470 Antelope Harvest, 1992-Present

Year	ES Licenses	D/F Licenses	Harvest D/F Licenses	% Success D/F	% Success ES	Total Harvest Data		
						Bucks	D/F	Total
1992	320	0	0		46%	107	36	146
1993	155	0	0		35%	46	8	54
1994	150	0	0		40%	43	17	60
1995	100	0	0		60%	51	9	60
1996	75	0	0					
1997	75	0	0					
1998	75	0	0					
1999	75	0	0					
2000	100	0	0		41%	41	9	50
2001	100	0	0					
2002	300	0	0		63%	166	22	188

2003	300	0	0		55%	126	36	164
2004	250	50	21	42%	54%	135	32	168
2005	250	50	18	36%	54%	107	47	154
2006	250	150	57	38%	49%	132	62	194
2007	250	150	63	42%	41%	110	82	192
2008	250	150	45	30%	50%	124	61	185
2009	250	150	47	31%	47%	111	69	180
2010	250	150	42	28%	40%	105	42	147
2011	150	50	14	28%	43%	57	21	78
2012*	100	25	7	28%	48%	46	16	62
2013*	100	25	9	45%	36%	42	21	63
2014*	100	25	12	48%	61%	60	21	81
2015*	100	25	8	32%	56%	61	11	72
2016*	100	25	13	50%	74%	80	17	97
2017*	100	100	53	53%	58%	63	59	122
2018*	150	200	66	34%	57%	94	66	160
2019*	150	200						

* expanded HD boundary

4. **What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

Antelope populations have been stable to increasing in this HD the past few years. Licenses have followed that trend. See attached surveys and harvest data. Increasing the quota ranges allows for increased harvest prescriptions if necessary, to follow trends.

Antelope HD 470 Survey Trends 1981 - Present.

Year	Type	Bucks	Does	Fawns	Total	F/100 Does	B/100 Does	# Licenses
1981	***T***	***225***	***524***	***320***	***1,069***	***61***	***43***	
1986	***T***	***203***	***508***	***281***	***992***	***55***	***40***	
1990	P	91	214	32	437	15	43	
1991	P	29	125	64	218	51	23	
1995	***T***	***69***	***210***	***67***	***346***	***32***	***33***	100 ES
1996	No		Survey					
1997	***T***	***82***	***239***	***57***	***378***	***24***	***34***	75 ES
1998	No		Survey					
1999	P				102	43	57	75 ES
2000	***T***	***113***	***286***	***192***	***591`***	***67***	***40***	100 ES
2001	P	82	261	91	434	35	31	100 ES
2002	P	75	157	120	352	76	48	300 ES
2003	***T***	***138***	***471***	***300***	***909***	***64***	***29***	300 ES
2004	P	141	236	75	452	32	60	250 ES, 50 D/F
2005	P	120	223	136	479	54	61	250 ES, 50 D/F
2006	***T***	***224***	***555***	***247***	***1,026***	***45***	***40***	250 ES, 150 D/F
2007	P	75	118	32	225	64	27	250 ES, 150 D/F
2008	P	64	191	67	322	34	35	250 ES, 150 D/F
2009	***T***	***246***	***507***	***160***	***913***	***32***	***49***	250 ES, 150 D/F
2010	P	79	188	51	318	27	42	250 ES, 150 D/F
2011	P	53	239	45	337	19	22	150 ES, 50 D/F
2012	***T***	***101***	***436***	***109***	***646***	***23***	***25***	
2012*	***T****	***160***	***561***	***147***	***868***	***26***	***29***	100 ES, 25 D/F
2013	P	132	351	113	596	32	38	100 ES, 25 D/F
2014	P	91	230	129	450	56	40	100 ES, 25 D/F
2015	***T***	***147***	***425***	***192***	***764***	***45***	***35***	100 ES, 25 D/F
2016	P	102	209	83	394	40	49	100 ES, 25 D/F
2017	P	60	126	45	231	36	48	100 ES, 100 D/F
2018	***T***	***330***	***501***	***200***	***1,031***	***40***	***66***	***150 ES, 200 D/F***
2019	P	170	385	120	674	31	44	150 ES, 200 D/F

****2012 Total of newly expanded HD 470***

T= Total Survey

P= Production Survey

5. Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).

The past two winters have been above normal precipitation and colder temperatures for the most part in the area. 2017/18 was one of the worst winters on record for the Great Falls area. Winter 2018/19 was fairly mild, with the exception of the month of February 2019, having about 45" snow and average temperature of 0.3 degrees in Great Falls for the month. Antelope in many areas have been declining since the winter of 2012, coupled with effects of the last two winters. HD 470 antelope numbers have been stable to increasing as license numbers have been adjusted to meet needs of populations as rise and fall with fawn production and recruitment related to weather conditions. Habitat conditions in the HD remain good.

6. Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).

No groups or landowners were contacted related to the proposal as this does not affect them. Proposal will allow increased hunter opportunity and flexibility to follow antelope as they migrate in and out of HD 470/471. Area wardens (Lewistown) agreed with the proposal.

Submitted by: Cory Loecker, R4 Wildlife Manager
Date: 10/9/2019

Approved:_____
Regional Supervisor / Date

Disapproved / Modified by:_____
Name / Date
Reason for Modification:

MONTANA FISH, WILDLIFE AND PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Antelope
Region: 4
Hunting District: 470, 471
Year: 2020-21

1. **Describe the proposed season / quota changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.). REMEMBER THIS STEP IS TO BE ACCOMPLISHED BY THE INITIAL ENTRY INTO THE DATABASE—SO FOLKS CAN START THIS NARRATIVE WITH #2 BELOW.**

For the upcoming 2020-21 hunting seasons:

- Eliminate hunting district (HD) 470, and the 470-20 either-sex and 470-30 doe/fawn license/permit types (LPTs),
- Change the boundary of HD 471 such that it absorbs the former area of HD 470,
- Increase the quota range for the 471-20 LPT from 25 to 400 to 25 to 700, and the quota from 200 to 350.
- Increase the quota range for the 471-30 LPT from 5 to 400 to 5 to 650, and the quota from 200 to 400.

Modifications to the 2019 Montana Antelope Hunting Regulations for either-sex and doe/fawn antelope would read (changes highlighted in RED):

HD	License	Opportunity	Apply by Date	Quota	Archery Only Dates	General Season Dates	Opportunity specific details and/or restrictions
Region 4							
471	Antelope License: 471-20	Either-sex	June 1	350	Sep 05-Oct 09	Oct 10-Nov 08	
	Antelope License: 471-30	Doe/Fawn	June 1	400	Sep 05-Oct 09	Oct 10-Nov 08	
	Antelope License: 900-20	Either-sex	June 1	5,600	Aug 15-Nov 08	-	First and only choice. ArchEquip only.

The legal descriptions would also be amended to read (changes highlighted in RED):

~~**470 Highwoods/Square Butte:** Those portions of Cascade, Chouteau, Judith Basin, and Fergus Counties lying within the following-described boundary: Beginning at the Missouri River at Great Falls, downstream along said river to its junction with Hwy 80 at Ft. Benton, then southerly along said highway to its junction with US Highway 87 at Stanford, then westerly along said highway to its junction with the Missouri River at Great Falls, the point of beginning.~~

471 ~~Geraldine~~Highwoods/Denton: Those portions of Cascade, Chouteau, Fergus and Judith Basin Counties lying within the following-described boundary: Beginning at Missouri River at Great Falls, ~~Ft. Benton,~~ downstream along said river to its junction with the mouth of the Judith River, then southerly up said river to its junction with US Highway 87 at Hobson, then northwesterly along said highway to ~~the junction of Hwy 80 at Stanford, then northerly along said highway to the~~ its junction with the Missouri River at ~~Ft. Benton~~ Great Falls, the point of beginning.

2. What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.

The objectives of the proposed changes are to: 1) Simplify antelope hunting regulations by reducing the number of antelope HDs and LPTs, 2) Make the boundaries more discernable via using major rivers and highways, 3) Better manage this overall antelope population, as the former boundaries likely did not capture the full range of this population, and 4) provide area landowners and hunters more flexibility in hunting/managing antelope in this area (i.e., more licenses valid across a larger district will allow more hunting where hunting is needed and less hunting where numbers are lower and/or absent in a given year). Figure 1 (at the end) shows the current HDs 470/471 and the proposed new HD 471.

3. How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.

The area biologists for HD 471 and region 4 wildlife manager will consider this proposal successful if: 1) antelope hunter numbers/harvest increase in HD 471, 2) population levels remain steady and/or decrease slightly, and 3) landowners cease to experience significant crop damage due to antelope in this district.

4. What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information.

The area biologists responsible for HD 471 conducted the last complete-coverage survey of this district this year (2019). We counted a total of 1,797 antelope, which represents a 21% increase over the last complete-coverage survey (2016) and a 58% increase over the HD's long-term average (LTA; 860 total antelope). Additionally, the Denton N subunit has been used as a barometer for the entire HD when complete-coverage surveys cannot be conducted. The 2019 Denton N subunit count is 51% above its LTA of 326. See Tables 2 and 3 for antelope survey data for HD 471 and the Denton N subunit, respectively.

The last complete coverage survey for HD 470 occurred in 2018, when the area biologist observed 1,031 total antelope. This count represented a 15% increase over the average since 2003, and was the highest count since 2006. Antelope in HD 470 have a history or remaining relatively stable, likely due to the propensity of native habitat across this HD.

5. Provide information related to any weather/habitat factors that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, temperature/precipitation information).

Antelope numbers across central/eastern Montana were at or near all-time highs in the early 2000s, prior to late summer bluetongue outbreaks in 2007 and 2008, which affected antelope numbers across numerous region 4, 5, 6, and 7 HDs. Then, in 2010-2011, a record 2010-2011 winter decimated antelope populations in these same areas. Since then, a mix of good precipitation summers/droughty summers and mild/severe winters have led to stagnant or mild antelope population performance across much of these regions. Another record winter (2017-18), following immediately after a record drought summer 2017 caused antelope declines again across most of Montana's antelope range. For the most part, antelope numbers in HD 471, and particularly around Denton, have\nevertheless persisted and even thrived despite this. Similarly, HD 470 antelope numbers have remained relatively stable since 2003. While poor population performance has affected many antelope districts in Region 4 and around Lewistown in particular, the area around Denton has seen above average and all-time high antelope numbers. Numerous landowners have filed game damage complaints with the department, as most of this area is cultivated cropland. Most of the landowners in this general area also allow opportunities for sportsmen to harvest antelope, and finding access is not too challenging compared to other species/areas.

6. Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).

Area game wardens and some of the landowners in this area whom we discussed the proposal support it. There are no significant negative consequences associated with this proposal.

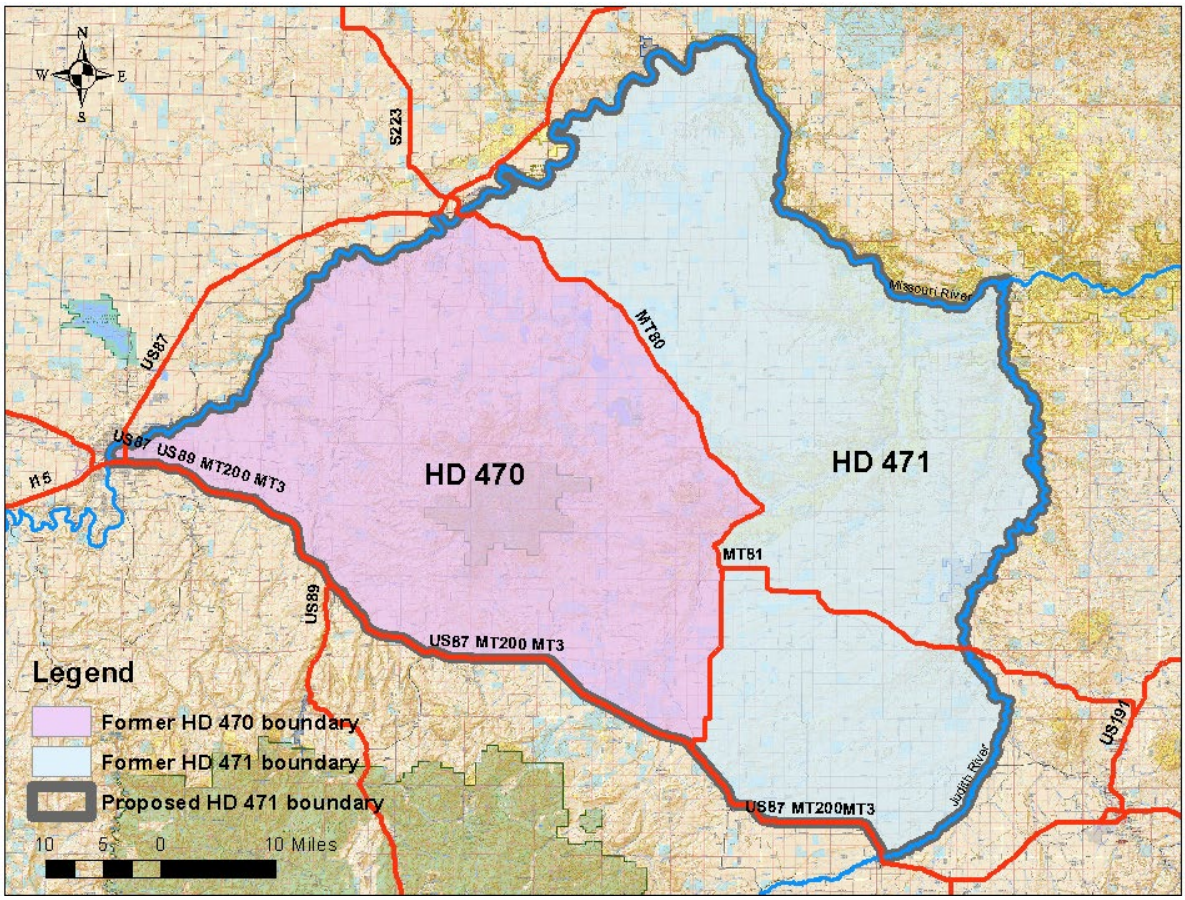
Submitted by: Sonja Andersen/October 2019

Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date

Reason for Modification:

Figure 1. Current HD 470/471 boundaries, overlaid by the new, proposed HD 471 boundary (thick grey outline).



MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Antelope
Region: 5
Hunting District: 512
Year: 2020

1. **Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).**

   The current quota range for the 512-20 either sex antelope license is 75-200 licenses. The proposal is to modify the quota range to 25-200 either sex licenses.

2. **What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.**

   Currently we are offering 50 either sex licenses. That number is below the current quota range and was approved by the FWP commission in spring of 2019 due to near record low antelope numbers in HD 512. The objective of the proposed quota range change is to allow for further reductions in either sex antelope licenses if antelope numbers continue to decline in HD 512.

3. **How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.**

   Success will be measured using annual aerial surveys and telephone harvest surveys to monitor the populations response and harvest response to this regulation change.

4. **What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

   The management goal for this hunting district is 500-600 total antelope. The long-term average is 390 antelope.

   The 2018 total coverage survey produced a population of 264 antelope, 32% below the long-term average. This was the lowest population level observed in this district since 1981. 2018 marked the lowest fawn: doe ratio ever observed in this district (Table 1). The 2018 harvest was only 24 antelope (Table 2). This was the lowest harvest ever recorded in the district. The success rate on the 75 ES licenses was only 27%. The long-term average success rate is 49% (Table 3). This record low harvest and harvest rate confirm the aerial survey results of low population numbers in HD 512. Only 94 antelope were observed on the trend HD 512 trend area in 2018. During the trend survey flight in July 2019, 98 antelope were observed on the trend area. This indicates the overall population has remained stable at very low levels.

   This population decline is likely a result of the harsh winter of 2017-18. This was followed by the severe winter of 2018-19. With two years of poor fawn production, we don't expect this population to increase in the coming year, even with a mild winter.

Table 1. Summary of recent total counts and trend area estimates of HD 512.

Year	Bucks	Does	Fawns	Total Antelope	Bucks/ 100 Does	Fawns/ 100 Does	Incre
Average	66	208	112	391	36	59	30
2018	53	171	40	264	31	23	15
2017	NA	NA	NA	465	37	64	32
2016	NA	NA	NA	479	42	54	NA
2015	82	268	132	480	49	67	28
2014	74	229	134	442	53	73	30
2013	73	266	130	469	27	49	28
2012	54	309	133	472	17	43	28
2011	81	300	133	493	27	44	27
2010	98	296	129	523	33	44	25
2009	100	298	131	526	34	44	25

2006	57	196	122	375	29	62	33
2002	71	238	139	448	30	58	31
1998	77	256	143	476	30	56	30
1994	111	331	126	568	34	38	20
1990	59	214	113	386	28	53	29
1986	42	169	97	308	25	57	31
1983	53	193	167	413	27	86	40
1981	44	126	89	259	35	71	34
1979	41	98	98	237	42	100	41
1977	23	86	55	164	27	64	34
1973	66	120	80	266	55	67	30
1971	32	102	65	199	31	64	33
1969	93	105	92	290	89	74	32

Table 1A. HD 512 Trend Area survey results 1983-2019.

Year	Adult Bucks	Yearling Bucks	Total Bucks	Does	Fawns	Total Antelope
1983	3	7	10	44	28	82
1990	17	19	36	83	44	163
1994	24	27	51	101	61	213
1998	20	40	60	98	80	238
2002	5	19	24	84	53	161
2006	16	11	27	54	38	119
2009	34	37	71	111	77	259
2010	51	20	71	114	71	256
2011	31	16	47	112	61	220
2012	10	3	13	117	65	195
2013	18	25	43	119	83	245
2014	18	21	39	74	54	167
2015	36	14	50	102	68	220
2016	21	26	47	112	60	219
2017	28	9	37	99	63	199
2018	**9**	**11**	**20**	**55**	**19**	**94**
2019	**8**	**5**	**13**	**57**	**28**	**98**

Table 2. Antelope license numbers and harvest data for HD 512, 1985-2018.

Year	License Type/Number	Hunters Afield	Hunterdays	Total Harvest	Ave Days Hunted	Effort	% Succ	Ant Pop.[1]
1985	75 ES	60	108	42	1.80	2.57	71[2]	
1986	100 ES	87	207	54	2.38	3.83	62	**308**
1987	100 ES	79	176	55	2.23	3.20	69	
1988	100 ES	79	144	52	1.82	2.77	66	
1989	100 ES	89	188	55	2.11	3.42	62	
1990	100 ES	88	247	64	2.81	3.86	73	**386**
1991	100 ES	90	206	60	2.29	3.43	64	
1992	100 ES	79	176	60	2.23	2.93	76	

1993	100 ES	83	154	62	1.86	2.48	74	
1994	150 ES	118	309	85	2.62	3.64	72	**568**
1995	150 ES	127	416	83	3.28	5.01	65	
1996	150 ES				2.83	4.57	62	
1997[3]	150 ES				3.68	8.07	46	
1998[3]	75 ES				2.22	3.89	57	**476**
1999[3]	75 ES				2.98	3.97	75	
2000	75 ES	57	117	38	2.05	3.08	67	
2001[3]	75 ES				3.37	5.83	58	
2002	75 ES	68	190	47	2.79	4.04	70	**448**
2003	75 ES	68[4]	130	51	1.91	2.55	73	
2004	75 ES	83	196	51	2.4	3.84	61	
2005	75 ES	86	316	51	3.7	6.20	59	
2006	75 ES	70	266	51	3.8	5.23	73	**375**
2007	75 ES	95	350	57	3.7	6.14	60	
2008	75 ES	75	275	52	3.7	5.23	69	
2009	125 ES	110	411	75	3.7	5.48	68	526
2010	125 ES + 25 DF	123	440	75	3.6	5.87	61	523
2011	125 ES + 25 DF	135	476	75	3.5	6.35	56	493
2012	100 ES + 25 DF	107	407	65	3.8	6.26	61	472
2013	100 ES + 25 DF	NA	NA	57	NA	NA	NA	**469**
2014	100 ES + 25 DF	94	355	63	3.8	5.63	67	442
2015	100 ES + 25 DF	89	330	62	3.7	5.32	70	480
2016	100 ES + 25 DF	NA	NA	68	NA	NA	NA	479
2017	100 ES + 25 DF	NA	NA	51	NA	NA	NA	465
2018	75 ES + 5 DF	53	182	24	3.4	7.58	45	264
2019	50 ES + 5 DF							

Table 3. HD 512 Antelope license numbers, harvest, and harvest success rates 2004-2018.

HD	Buck Harv. (sumsum)	Doe Harv. (sumsum)	Fawn Harv. (sumsum)	Total Harv. (sumsum)	ES Permits Issued	ES Harvest	ES-Bucks Harvested	ES-Does Harvested	ES-Fawns Harvested	ES Harvest Rate	Buck Harvest Per ES License	Doe Harvest Per ES License	Fawn Harvest Per ES License
2004	32	18	0	50	75	43	27	14	0	0.57	0.36	0.19	0.00
2005	34	15	0	49	75	46	30	13	0	0.61	0.40	0.17	0.00
2006	38	13	0	51	75	41	31	10	0	0.55	0.41	0.13	0.00
2007	45	12	0	57	75	50	41	10	0	0.67	0.55	0.13	0.00
2008	35	17	0	52	75	39	28	11	0	0.52	0.37	0.15	0.00
2009	59	15	2	76	125	67	50	15	2	0.54	0.40	0.12	0.02
2010	57	17	1	75	125	59	52	6	1	0.47	0.42	0.05	0.01
2011	57	17	1	75	125	57	51	6	0	0.46	0.41	0.05	0.00
2012	43	21	2	65	100	48	37	11	0	0.48	0.37	0.11	0.00
2013	37	20	0	57	100	50	37	13	0	0.50	0.37	0.13	0.00
2014	42	18	3	63	100	46	37	5	3	0.46	0.37	0.05	0.03
2015	43	19	0	62	100	47	38	9	0	0.47	0.38	0.09	0.00
2016	45	22	1	68	100	51.7	41	9.5	1.2	0.52	0.41	0.10	0.01
2017	32	18	0	50	100	31	21	9	0	0.31	0.21	0.09	0.00
2018	14	10	0	24	75	20	12	8	0	0.27	0.16	0.11	0.00
Average	41	17	1	58	95	46.38	35.53	9.97	0.48	0.49	0.37	0.11	0.00

5. Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).

The winter of 2017-18 was unusually severe with colder than average temperatures and above average snowpack. Spring green up was also 2 weeks later than normal. These conditions combined to cause increased overwinter mortality of all age classes of antelope. In addition, adult does came through the winter in poor condition resulting in poor fawn production in the spring of 2018. The winter of 2018-19 was also severe. February brought record breaking cold temperatures and snowfall. Spring green up was delayed approximately two weeks. We observed poor overwinter survival for a second year in a row

along with poor fawn production. We anticipate the population will remain low in the coming year. Further license reductions below the current 50, may be needed.

6. **Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).**

   Local FWP enforcement personnel have been consulted and support this license quota reduction. No landowners or sportsmens groups have been consulted and no comments have been received in support or opposition to this proposal.

Submitted by: **Justin Paugh**
Date: **9/21/19**
Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date
Reason for Modification:

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Antelope
Region: 5
Hunting District: 590
Year: 2020

1. **Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).**

The current quota range for the 590-20 either sex antelope license is 450-800 licenses. The proposal is to modify the quota range to 200-800 either sex licenses.

2. **What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.**

Currently we are offering 450 either sex licenses. That number is the bottom of the current quota range. The objective of the proposed quota range change is to allow for further reductions in either sex antelope licenses if antelope numbers continue to decline in HD 590.

3. **How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.**

Success will be measured using annual aerial surveys and telephone harvest surveys to monitor the population and response to this regulation change.

4. **What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

The population objective is 3,000 to 3,500 antelope. The long-term average population is 3,181. During the last total coverage survey in 2016, 3,257 antelope were observed. The trend area estimate in 2019 is 2,223 (1,897-2,549 80% CI). This is a 15% decline from the 2018 trend area estimate and 30% below the long term population average. This population has seen a long-term gradual decline since its peak of 4,500 antelope in the late 1980's. In 2019, I observed 27 bucks/100 does on the trend area, this is 28% below the long-term average. I observed 52 fawns/100 does, 9% below the long-term average.

Table 1. Summary of recent total counts and trend area estimates of HD 590. Years with trend estimates denoted with bold font.

Year	Bucks	Does	Fawns	Total Antelope	Bucks/ 100 Does	Fawns/ 100 Does	Incre
2019	NA	NA	NA	2,223	27	52	29
2018	NA	NA	NA	2,615	23	33	21
2017	NA	NA	NA	3,059	30	72	36
2016	694	1664	899	3,257	42	54	28
2015	499	1,321	775	2,448	32	45	32
2014	590	1,595	890	2,991	34	47	30
2013	696	1,629	762	2,994	43	47	25
2012	388	1,034	679	1,892	38	66	36
2011	567	1,774	980	3,321	32	55	30
2010	706	1,971	1,011	3,688	36	51	27
2009	613	1,653	961	3,142	37	58	31
2007	395	1,652	1,090	3,437	42	66	32
2003	839	1,855	1,429	4,607[9]	45	77	35
1999[5]	394	1,175	864	2,433	34	74	36
1995[2]	603	1,749	1,010	3,362	34	58	30
1991	832	1,952	1,203	3,987	43	62	30
1988	982	2,000	1,355	4,506[3]	49	68	31
1987	940	1,927	1,466	4,333	49	76	34
1985	730	1,767	1,164	3,694[4]	41	66	32
1984	787	1,643	1,167	3,597	48	71	32
1981	571	1,362	1,049	2,982	42	77	35
1979	358	917	799	2,074	39	87	39
1977	265	677	577	1,519	39	85	38

Figure 1. HD 590 Total Antelope Population 1977-2019. Red line is long term population average.

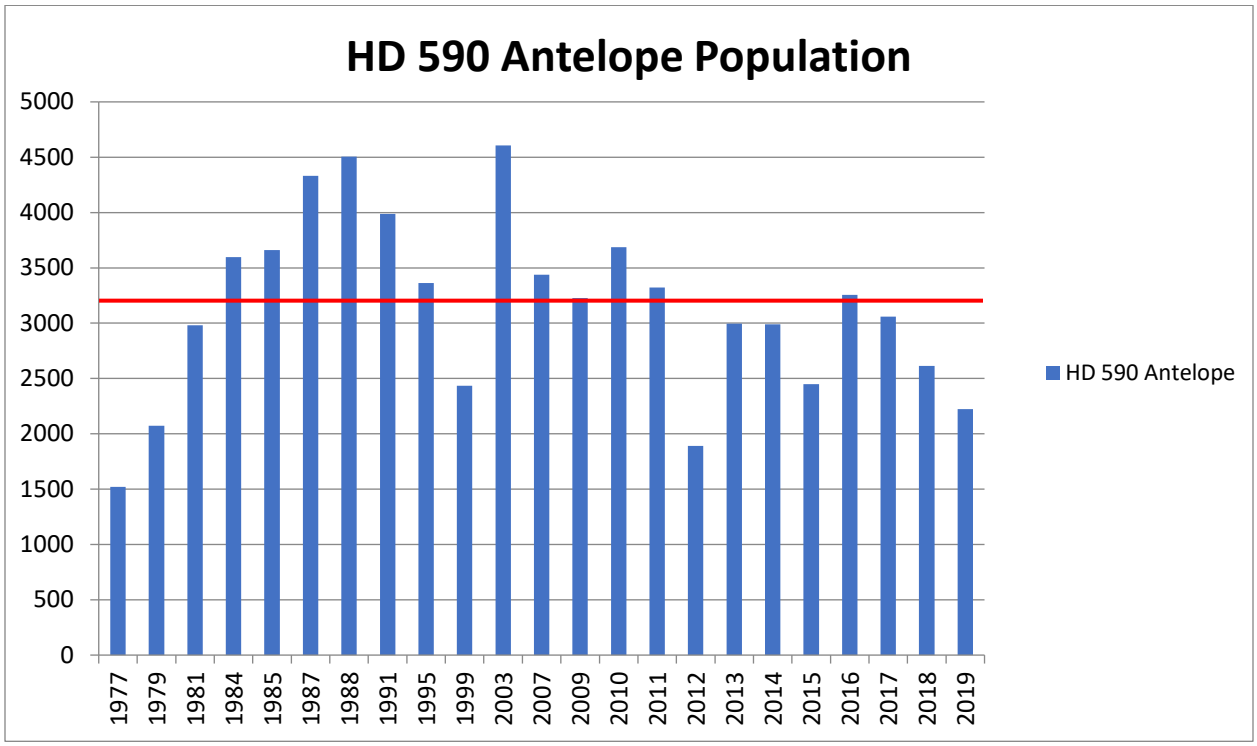


Table 2. HD 590 Trend Area antelope numbers and ratios 1984-2019.

Year	Adult Bucks	Yearling Bucks	Total Bucks	Does	Fawns	Total Antelope	B/100 Does	F/100 Does	Increment
1984	235	118	353	645	445	1443	54.7	69.0	30.8
1985	174	126	327	652	441	1420	50.2	67.6	31.1
1987	130	180	310	679	535	1524	45.7	78.8	35.1
1988	129	186	315	680	465	1550	46.3	68.4	30.0
1991	152	134	286	763	452	1501	37.5	59.2	30.1
1995	141	114	255	601	275	1131	42.4	45.8	24.3
1999	35	68	103	456	325	884	22.6	71.3	36.8
2003	140	161	301	674	531	1506	44.7	78.8	35.3
2007	69	138	207	568	364	1139	36.4	64.1	32.0
2009	131	66	197	599	311	1107	32.9	51.9	28.1
2010	168	81	249	723	340	1312	34.4	47.0	25.9
2011	113	92	205	554	284	1043	37.0	51.3	27.2
2012	49	40	89	331	154	574	26.9	46.5	26.8
2013	93	152	245	576	197	1018	42.5	34.2	19.4
2014	88	103	191	562	264	1017	34.0	47.0	26.0
2015	82	63	145	449	204	798	32.3	45.4	25.6
2016	102	78	180	610	315	1105	29.5	51.6	28.5
2017	98	55	153	516	372	1041	29.7	72.1	35.7
2018	83	42	125	553	183	861	22.6	33.1	21.3
Average	116.4	105.1	222.9	589.0	339.8	1156.5	37.0	57.0	28.9

2019	73	32	105	393	204	702	26.7	51.9	29.1
% Dev.	-37.3	-69.6	-52.9	-33.3	-40.0	-39.3	-27.7	-8.9	0.4

Table 3. Antelope license numbers and harvest data for HD 590, 1985-2019.

Year	License Type/Number	Hunters Afield	Hunterdays	Total Harvest	Ave Days Hunted	Effort	% Succ	Ant Pop.[1]	% Pop. Harv.
1985	700 ES + 200 DF	600	1,039	566	1.73	1.84	80/127[2]	**3,694**	**15.3**
1986	800 ES + 500 DF	711	1,446	906	2.03	1.59	88		
1987	700 ES + 1400 DF	590	1,301	951	2.21	1.37	87	**4,333**	**21.9**
1988	800 ES + 1600 DF	673	1,420	904	2.11	1.57	78	**4,506**	**20.1**
1989	800 ES + 1600 DF	668	1,456	996	2.18	1.46	80		
1990	800 ES + 1600 DF	668	1,455	1,002	2.17	1.45	79		
1991	800 ES + 800 DF	677	1,229	786	1.82	1.56	77	**3,987**	**19.7**
1992	800 ES + 800 DF	665	1,374	774	2.07	1.78	76		
1993	800 ES + 800 DF	419	831	404	1.98	2.06	71		
1994	800 ES + 800 DF	623	1,264	623	2.03	2.03	76		
1995	800 ES + 800 DF	630	1,375	622	2.18	2.21	72	**3,362**	**18.5**
1996	650 ES	498	1,085	312	2.18	3.48	63		
1997[3]	450 ES				2.16	3.68	59		
1998[3]	450 ES				2.09	3.35	62		
1999[3]	450 ES				2.22	3.57	62	**2,433**	
2000	600 ES	467	954	341	2.04	2.80	73		
2001[3]	800 ES				2.30	3.42	67		
2002	700 ES + 700 DF	581[4]	1,332	581	2.29	2.29	78		
2003	800 ES + 800 DF	732[4]	1,782	672	2.43	2.65	71	**4,607**	**14.6**
2004	800 ES + 1600 DF	576	1,516	684	2.6	2.22	119		
2005	700 ES + 1400 DF	485	1,455	556	3.0	2.62	115		
2006	700 ES + 1400 DF	509	1,460	610	2.9	2.39	120		
2007	700 ES + 1400 DF	579	1,541	693	2.7	2.22	120	**3,437**	**20.2**
2008	700 ES + 1400 DF	583	1,873	425	3.2	4.41	73		
2009	700 ES + 1400 DF	554	1,657	509	3.0	3.26	92	3,226	15.8
2010	700 ES + 500 DF	614	1,763	481	2.9	3.67	78	3,688	13.0
2011	700 ES + 500 DF	572	1,454	446	2.5	3.26	78	**3,321**	**13.4**
2012	450 ES + 100 DF	325	989	207	3.0	4.78	64	1,892	10.9
2013	600 ES + 200 DF	NA	NA	344	NA	NA	NA	2,994	11.5
2014	600 ES + 200 DF	487	1,209	318	2.5	3.80	65	2,991	10.6
2015	500 ES + 100 DF	405	1,180	286	2.9	4.13	71	2,448	11.7
2016	500 ES + 250 DF	NA	NA	336	NA	NA	NA	**3,257**	**10.3**
2017	500 ES + 250 DF	NA	NA	323	NA	NA	NA	3,059	10.6
2018	500 ES + 100 DF	339	1,089	182	3.2	5.98	54	2,615	7.0

5. Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).

Access complaints from hunters have increased over the past four years indicating access to private land is getting more restrictive. In 2018 there were only 344 first choice applicants for the 500 ES licenses. The number of 1st choice applicants has declined annually for the past four years. Hunters are shifting to other districts due to reduced access to private lands and/or reduced hunter success. 2018 harvest success was only 27% on the ES license, this was a record low. Average harvest success on the ES license in 590

is 42%. Based on the continued population decline and unexpected drop in hunter success in 2018 further license number reductions may be needed in the coming years.

The winter of 2018-19 was the second consecutive winter with colder than average temperatures and above average snowpack. Spring green up was also 2 weeks later than normal. These conditions combined to cause increased overwinter mortality of all age classes of antelope. In addition, adult does came through the winter in poor condition resulting in poor fawn production in the springs of 2018 and 2019.

6. Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).

Local FWP enforcement personnel have been consulted and support this license quota reduction. Access complaints from individual hunters have increased over the past four years indicating access to private land is getting more restrictive. No landowners or sportsmens groups have been consulted and no comments have been received from them in support or opposition to this proposal.

Submitted by: **Justin Paugh**
Date: **9/21/19**
Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date
Reason for Modification:

MONTANA FISH, WILDLIFE & PARKS

HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Antelope

Region: 6

Hunting District: 640

Year: 2020-2021

1. Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).

This proposal aims to create a new Antelope Hunting District, HD 640 from a portion of the current Antelope HD 670 and HD 650 (note: separate HD 670 proposal). This boundary change, creation of new

HD 640 and new alignment will overlap the proposed HD 640 for deer/elk and have the same boundaries and name for simplification. With the creation of a new HD 640, 2 new LPT's will be created for Either Sex (640-20) and Doe/Fawn licenses (640-30) (Table 1).

HD 640 was a separate antelope district prior to 2004. It was combined with HD 670 to make for larger antelope hunting districts and allow for hunter flexibility. A trade off is that most hunting and harvest occurs in areas with more public land and little harvest is occurring in the eastern portion of the current HD 670.

Description for proposed NEW HD 640 (Figure 1) and proposed quota and quota range (Table 1):

- 640 Northeast Montana: Those portions of Daniels, Sheridan, Roosevelt and Valley Counties lying within the following-described boundary: Beginning at a point where State Route 24 crosses the Canadian border, then southerly along said route to the Fort Peck Indian Reservation boundary, then easterly along said boundary to Big Muddy Creek, then southerly along said creek to the Missouri River, then easterly down the Missouri River to the North Dakota border, then north along said border to the Canadian border, then westerly along said border to State Route 24, the point of beginning.

Figure 1. Current hunting districts relative to the proposed Antelope HD 640.

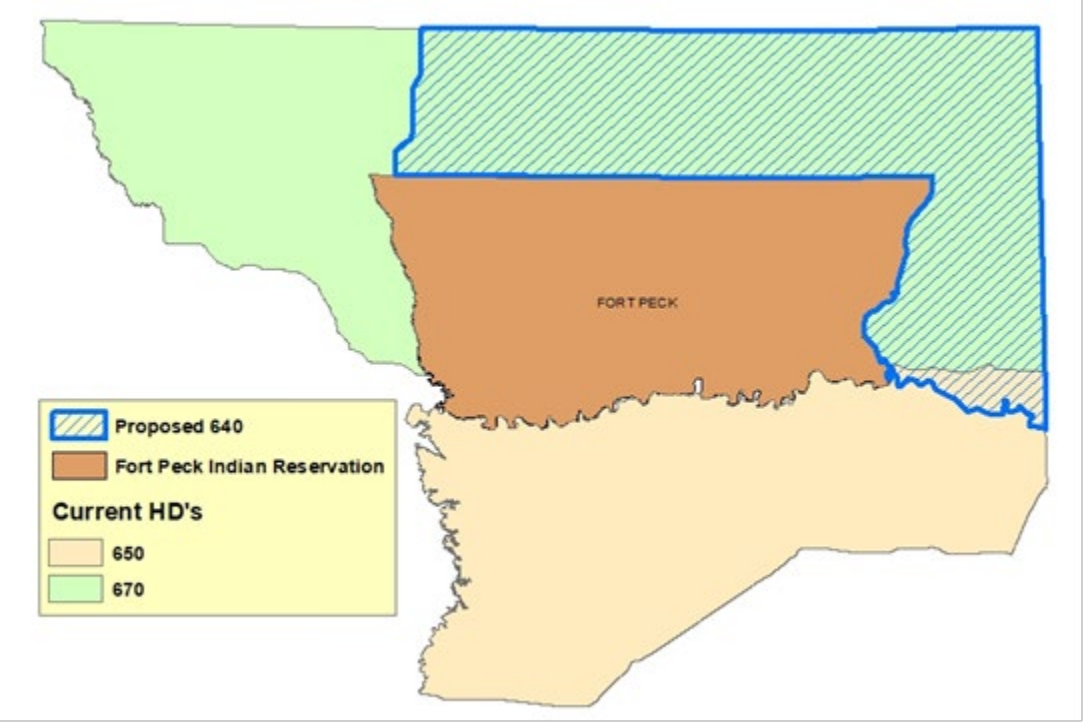


Table 1. Proposed Quota ranges and Quotas for LPTs in new HD 640.

Proposed LPT	Quota	Range Min	Range Max
640-20	100	50	300
640-30	25	10	100

2. What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.

The overall objective is simplification of the HD's and boundary language across species and to simplify the HD's and LPT's in Region 6. Currently the antelope HD boundary and number (HD 670) does not line up with the current Deer and Elk HD boundaries and numbers (overlaps HD 670, HD 640 and HD 641). Splitting the current HD 670 into 2 HD's and changing the boundaries will align with the proposed HD 640 Deer/Elk HD and cause less confusion to sportsman as to what HD they apply for and hunt in.

3. How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.

Trends in antelope populations are monitored by completing summer aerial surveys on counting units set up across the region. Total number of antelope observed, as well as buck and fawn ratios from these surveys, are measured against population objectives. The proposed HD 640 does not have an Antelope Counting Unit located within the proposed boundaries but counting units are near the proposed HD 640. Trends and ratios from neighboring counting units, harvest statistics, drawing odds, local observations and public input will determine the success of splitting HD 640 out from the current structure.

4. **What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

Total antelope observed on HD 670 was up 94% from last year, and above the 10-year average by 94%. Fawn ratios remain above their ten-year average with 74 fawns:100 does seen during this year's survey. Adult buck numbers remain high in this district. Antelope density is now within the objective identified in the management plan (Table 2).

Table 2. Counting Unit trend and ratios as compared to Average and Management Objective for Current HD 670, 2013-2019.

(Current) HD670	Management Plan Objective	2019 Survey	2018 Survey	2017 Survey	2016 Survey	2015 Survey	2014 Survey	2013 Survey	10-Year Average
Density	1.0 - 1.6	1.4	0.7	0.8	0.8	0.7	0.6	0.4	0.8
Bucks:100 does	30 - 40	40	48	63	58	68	45	32	40
Fawns:100 does	80 - 100	74	65	62	63	75	75	68	61

5. Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).

There seems to be a natural split east and west of HWY 24 (proposed western boundary) relative to occupied habitats and landscape habitats as well as known populations found east of that HWY in the current HD 670. The boundary change makes sense as it will give folks who desire to hunt around the

greater Plentywood a better chance at drawing at license for this proposed HD. Those hunters who prefer to hunt west of HWY 24 may still apply for the proposed restructured HD 670 and hunt in that HD.

6. Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).

There is a growing frustration with current regulations, confusion between LPT numbering and overlapping of HD's with HD's of different species. One common concern/comment heard in the NE corner is the antelope HD 670 needs to be split so the Plentywood area hunters don't have to compete with hunters who hunt further west (likely the majority of license holders) in the current antelope HD 670. Also, some confusion has occurred with current naming (HD 670 antelope overlapping HD 640 and HD 641 Deer/Elk) possibly resulting in some confusion as to where the LPT is valid. Splitting the district and aligning with the proposed HD 640 Deer/Elk as well as naming the proposed HD 640 the same will work towards this concern. We have heard very little concern about simplifying the regulations, HD's and LPT's in this part of the region.

Submitted by: Ryan Williamson, Plentywood Area Wildlife Biologist

Date: 10/16/2019

Approved: _____

Regional Supervisor / Date

Disapproved / Modified by: _____

Name / Date

Reason for Modification:

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Antelope
Region: 6
Hunting District: 670
Year: 2020-2021

1. Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).

This proposal aims to shift the boundaries of antelope HD 670 to align with the proposed deer and elk HD 670 boundary change. More specifically, the proposal is to shift the western boundary to Harlem-Turner Road (Route 241), obsorbing a portion of antelope HD 600, and moving the new eastern boundary of HD 670 to HWY 24 to account for a new proposed antelope HD to the east, HD 640, and move the southern boundary to be Highway 2 (Fig 1).

The LPTs that are directly tied to this proposal are HD 600 (600-20 – either-sex; 600-30 – doe/fawn) and HD 670 (670-20- either-sex; 670-30 – doe/fawn). Current license allocations and ranges vary by the HD with:

HD 600

600-20 either-sex license: currently100, range 50─1500
600-30 doe/fawn license: currently 5, range 50-1000

HD 670

670-20 either-sex license: currently 300, range 25-500
670-30 doe/fawn license: currently 25, range 10-200

Legal Description for proposed NEW HD 670 (Figure 1) and proposed quotas and quota ranges:

Those portions of Blaine, Phillips, Valley, and Daniels counties lying within the following-described boundary: Beginning at a point where the Harlem-Turner Road (Route 241) joins the Canadian line, then southerly along said road to US Highway 2 at Harlem, then east and south along said highway to the Milk River Bridge at the Fort Belknap Indian Agency, then easterly along the Milk River to the Milk River Bridge on US Highway 2 west of Dodson, then easterly along said Highway to Nashua, then northerly along Porcupine Creek to the West Fork of Porcupine Creek, then northerly along said creek until the north boundary of the Fort Peck Indian Reservation, then easterly along said boundary until MT Highway 24, then northerly along said highway to the Canadian border, and then westerly until Harlem-Turner Road (Route 241), the point of beginning.

- Antelope Either-sex License Range 25-2,000, Proposed Quota 400
- Antelope Doe/Fawn License Range 10-1,200; Proposed Quota 75

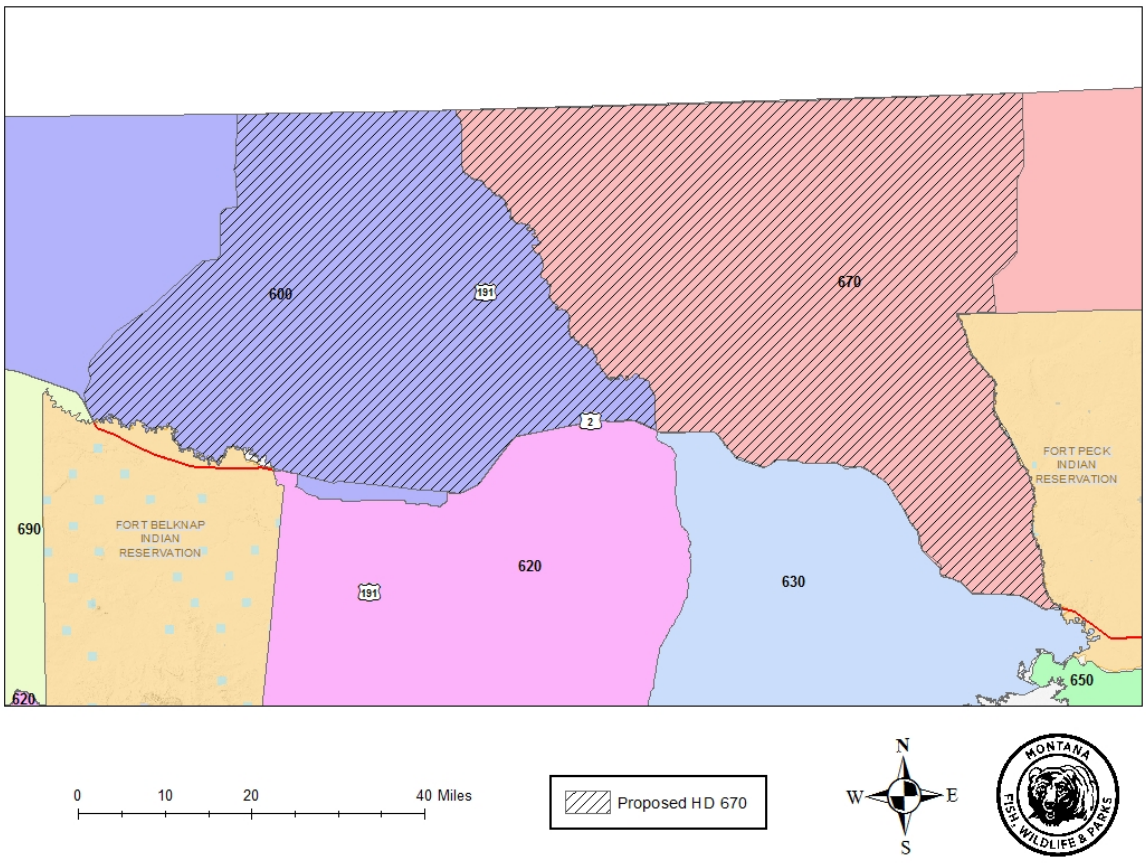


Figure 1. Current hunting districts relative to the proposed HD 670.

2. What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.

The overall objective is simplification of the HD's and boundary language across species and to simplify the HD's and LPT's in Region 6. Taking portions of antelope HD 600 and antelope HD 670 to make a new boundary for antelope HD 670 will align with the proposed HD 670 Deer/Elk HD and cause less confusion to sportsman as to what HD they apply for and hunt in as well as account for similar habitats and antelope populations.

3. How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.

Trends in antelope populations are monitored by completing summer aerial surveys on counting units set up across the region. Total number of antelope observed, as well as buck and fawn ratios from these surveys, are measured against population objectives. The proposed boundary change to HD 670 has multiple Antelope Counting Units located within the proposed boundaries that will be used to along with their respective long-term data sets to assess any changes in populations over time.

4. **What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

There are currently multiple antelope counting areas flown annually during a summer aerial survey flights and their respective data are below.

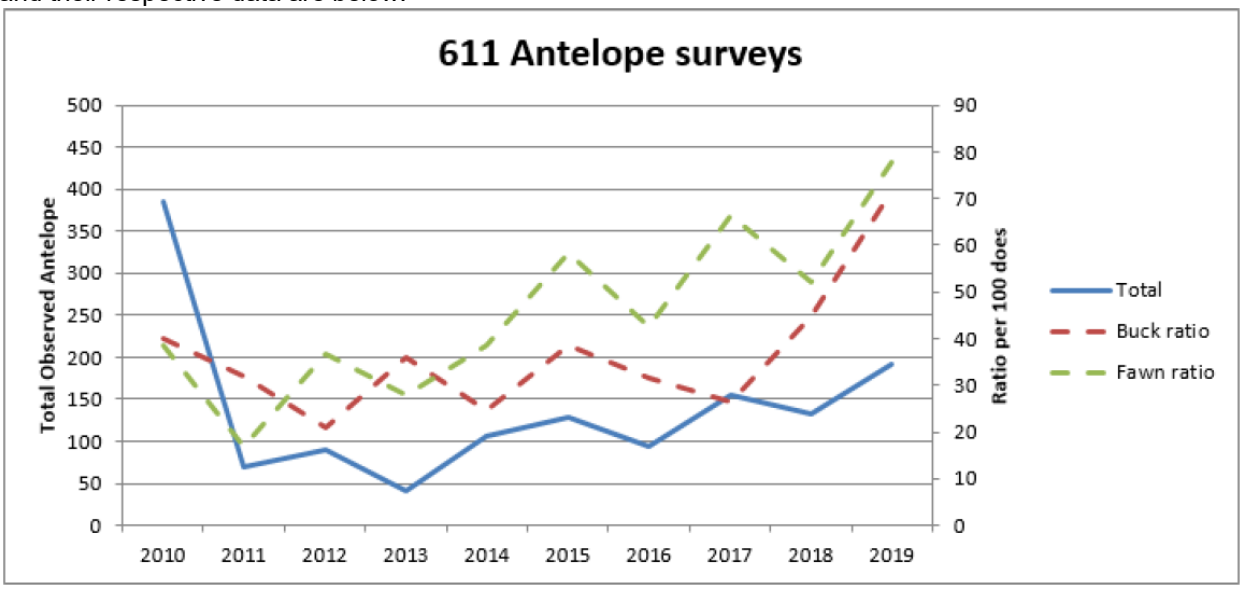


Figure 2. Region 6 summer antelope trends in Antelope Counting Units 5 & 7 in antelope HD 600 (Deer and Elk HD 611), 2010-2019.

Comparison of CUs 5 & 7 to MFWP Region 6 Antelope Management Plan (April 1996) population objectives:

	Management Plan Objective	2019 survey	2018 survey	2017 survey	2016 survey	2010 Survey (pre-winter mortality)	10-year average
Density	1.0 – 1.6	0.9	0.6	0.7	0.4	1.8	1.0
Bucks:100 does	30 - 40	71	45	26	31	40	37
Fawns:100 does	80 – 100	78	52	66	43	38	46

Total antelope numbers observed for 2019 summer surveys were 38% above long-term average. Fawn ratios and buck ratios were 66% above and 82% above long-term average, respectively.

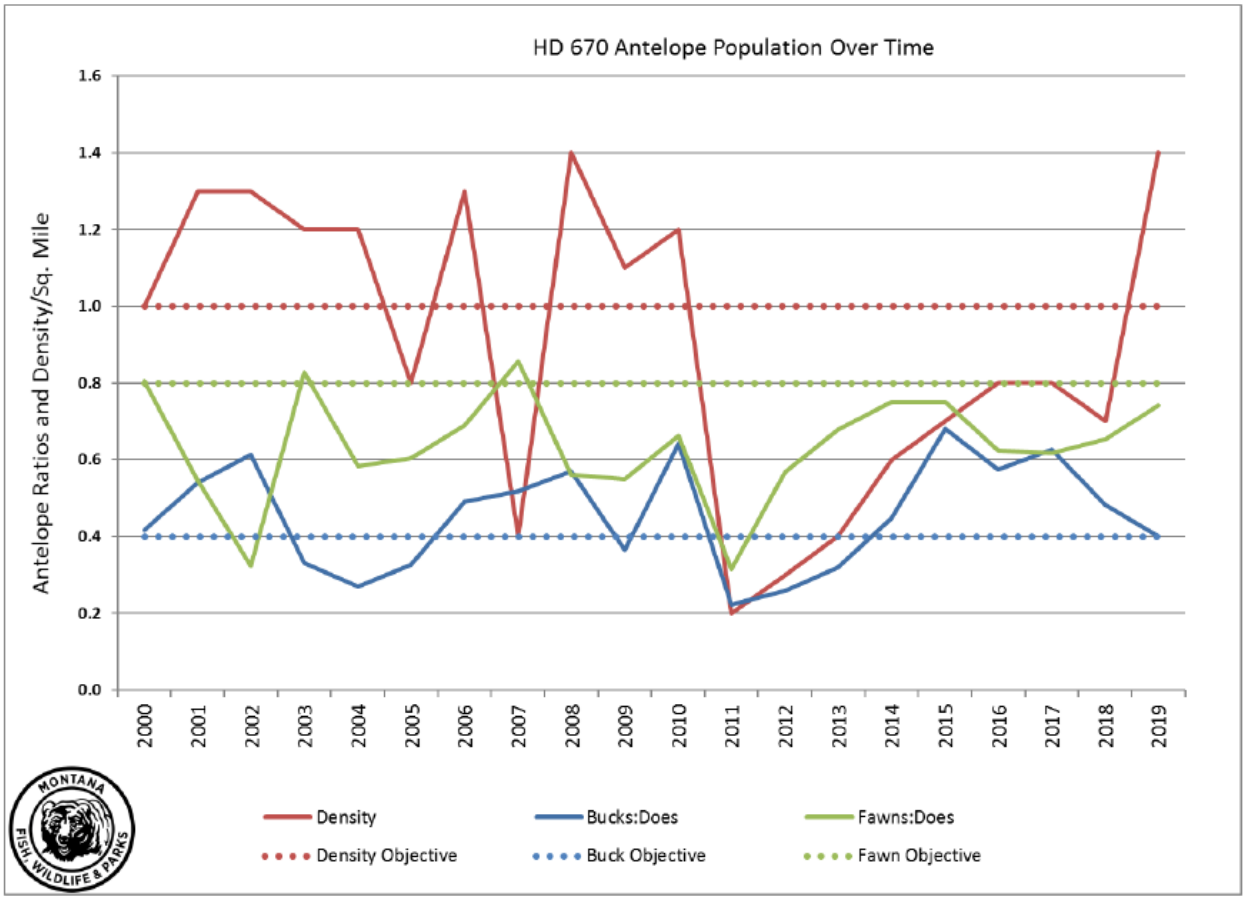


Figure 3. Region 6 summer antelope trends in Antelope Counting Units 6 & 15 in antelope HD 670.

	Management Plan Objective	2019 survey	2018 survey	2017 survey	2016 survey	2015 survey	2014 survey	2013 survey	10-year average
Density	1.0 - 1.6	1.4	0.7	0.8	0.8	0.7	0.6	0.4	0.8
Bucks:100 does	30 - 40	40	48	63	58	68	45	32	40
Fawns:100 does	80 – 100	74	65	62	63	75	75	68	61

Total antelope numbers observed for 2019 summer surveys were 94% above the 10-year average. Fawn ratios were 21% above the 10-year average and buck ratios were right at the 10-year average.

5. Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).

This change will help with the state and regional goal to simplify regulations and HD's within the region. Habitat types within the described proposed boundary change align more closely to each other than the current hunting district boundaries and this will align antelope hunting districts with the deer and elk hunting districts in the area to provide a simpler and clearer understanding for hunting opportunities, especially individuals who with to hunt both deer and antelope within the same location.

6. Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).

There is continual frustrations heard about current regulations and confusion between LPT numbering and overlapping of HDs of different species and different numbers. In talking with this potential HD change in public meetings (discussed at the Breaks Elk Working Group Meeting) as well as in the field with multiple sportsmen it is agreed that this will be a move in the right direction to simplify regulations while maintaining great opportunity.

Submitted by: **Brett Dorak, Malta Area Wildlife Biologist**

Date: **10/21/2019**

Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date

Reason for Modification:

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Pronghorn
Region: 7
Hunting District: All Region 7 HDs
Year: 2020

1. **Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).**

We propose to rename the 700-20 and 700-30 pronghorn licenses to 007-20 and 007-30, respectively. These licenses are valid across Region 7.

2. **Why is the proposed change necessary?**

Region 7 wildlife staff suspect the pronghorn harvest and hunter effort survey estimates to be highly skewed, with an overestimate in HD 700 and underestimates in HDs 701-705. The current prefix of "700" for these LPTs may confuse hunters by making them believe the licenses were used in HD 700 or that the whole Region is named "700." Other factors may also contribute to this bias.

Some of the reasons why regional staff believe that harvest and hunter efforts in HD 700 are biased high include the following. Hunting district 700 is 2,786 mi^2, which is merely 9% of Region 7. The 2018 estimated population in HD 700 is only 4% of the region-wide estimate. However, 2018 harvest and hunter effort surveys indicate that 27% of those region-wide totals occurred in HD 700. Furthermore, in 2018 the total estimated harvest in HD 700 was 1,353, which is unlikely given that the estimated pronghorn population for the district was only 1,828.

Wildlife managers use as much information as they have at their disposal to make the best decision possible. Since harvest and hunter effort estimates are likely heavily skewed for the 700-20 and 700-30 LPTs, Region 7 staff are not able to rely upon them when setting pronghorn seasons. It would be in the best interest to correct

this bias so Region 7 staff can begin using harvest and hunter effort estimates to help guide pronghorn population management.

3. **What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

   Not applicable.

4. **Provide information related to any weather/habitat factors that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, temperature/precipitation information).**

   Not applicable.

5. **Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).**

   No contacts have been made with the general public. This is more of a house-keeping issue.

Submitted by: **John Ensign**
Date: **10/xx/19**

Approved: **10/xx/19**
Regional Supervisor / Date

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Pronghorn
Region: 7
Hunting District: 704 and 705
Year: 2020

1. **Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).**

   Create a doe/fawn license (799-30) valid in HDs 704 and 705. This license will be available over-the-counter on a first-come, first-served basis to those hunters successful in drawing a 700-20 and/or 700-30 antelope license. Limit of 1 per hunter.

   The proposed quota is 2,500 with a quota range from 50 to 4,000.

   Prior License History:

Year	Region-Wide Either - Sex	Region-Wide Doe/Fawn
2019	8,500	1,500
2018	8,000	1,500
2017	7,500	1,500

2016	7,500	1,500
2015	5,000	100
2014	3,000	100
2013	3,000	100
2012	3,000	100
2011	6,500	250
2010	11,000	2,000
2009	13,000	10,000
2008	13,000	10,000
2007	13,000	11,000
2006	13,000	10,000

2. Why is the proposed change necessary?

Results from the Summer 2019 aerial surveys indicate antelope numbers across the Region are at long term (post 1992) average (LTA) and fawn production (76 fawns:100does) is healthy at 4% above the LTA. Additionally, the buck ratio is 54:100 does, near the LTA. Across the region yearling buck recruitment averages a healthy 39% of the buck component.

While the region-wide total count is at the LTA, there is a strong disparity in antelope densities between the southern and northern portions of the region. A series of extreme environmental conditions over several years resulted in antelope populations across the region hitting a low point in 2012. Since then population recovery has been variable. Populations are generally slow to recover in HDs 700and 701, where populations are below average and recruitment remains relatively low. The Sagehen trend area near Jordan (HD 701), for example, is 62% below the LTA for observed counts and yearling buck recruitment at 22%. Conversely, antelope populations in portions of HDs 704 and 705 are well above the LTA. For example, the Thompson Creek trend area by Alzada (HD 705) is near record high counts since the trend area was established in the 1980's. Observed numbers in 2019 are more than double the LTA, and yearling buck recruitment is at 49%.

Demand for antelope hunting opportunities is high. Hunter interest in doe/fawn opportunity exceeds the recent license allocation of region-wide doe/fawn licenses. From 2017-19, approximately 48% of 1st choice resident applicants received a license. Additionally, landowner complaints about an overabundance of antelope have been increasing in HDs 704 and 705, as well as frustration with not offering more licenses when numbers are so abundant. Adding an additional doe/fawn license in HDs 704 and 705 will increase harvest where antelope numbers and hunting opportunity are high, and may relieve some landowner issues.

The purpose of the additional doe/fawn license is to concentrate more harvest in these areas of high abundance. FWP staff have successfully used multiple avenues (news releases, social media, hunter contacts, etc) to shift hunters to HDs 704 and 705. Incorporating this additional doe/fawn license will serve to provide sportsman with increased harvest opportunity and reduce issues of an overabundance of antelope on private lands. The prerequisite of possessing a 700-20 and/or 700-30 antelope license prior to obtaining this new doe/fawn license is intended to allow increased harvest opportunity where antelope numbers are stronger (i.e., HDs 704 and 705) without exacerbating hunter crowding.

Across the region antelope populations consist of high buck ratios. As the buck component is not a major driver in population recovery, the region-wide either-sex licenses have been incrementally increased to take advantage of the opportunity that is afforded biologically. Over the last three years the number of either-sex licenses offered has met 93% of the 1st choice resident demand.

3. What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).

Summer 2019 trend area surveys in Region 7 indicate that total observed antelope numbers are now more than double the low in 2012. The current count of 3,392 is at the LTA. However, as previously stated, there is a

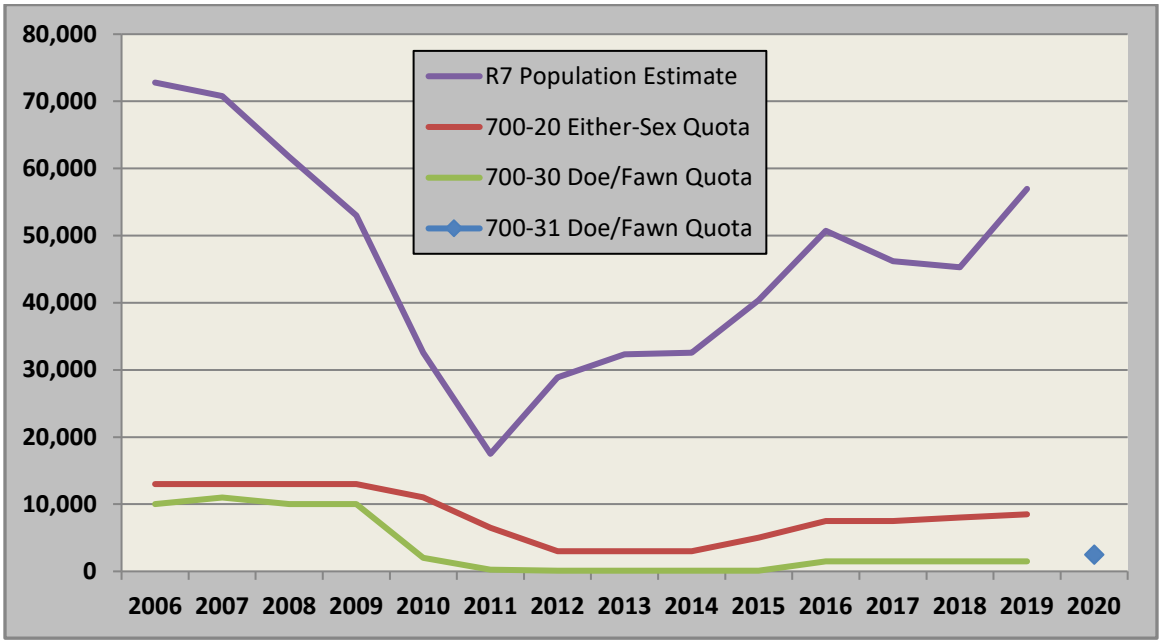
strong disparity in population performance between the northern and southern portions of the Region. Overall surveys indicate a buck:doe:fawn ratio of 54:100:76, with the LTA at 53:100:72. The 2019 regional antelope population estimate is approximately 56,970; 22% above the LTA. Adult does constitute approximately 43% of the population, or about 24,500.

Given current license allocations and hunter success, we anticipate a total harvest of 4,920, or approximately 9% of the 2019 antelope population. Given the buck:doe ratios, moderate to strong recruitment since 2014, and typical annual adult survival, these harvest rates are expected to be sustainable. Current harvest estimates place the doe harvest (1,140) at 23% of the total harvest and 5% of the doe component of the population. Forty-four percent of the doe harvest is attributed to the 700-20 ES license; 56% to the 700-30 DF license. Adding 2,500 doe/fawn licenses valid in HDs 704 and 705 is expected to increase doe/fawn harvest there by approximately 1,000. This would produce a total regional doe harvest of approximately 2,140, or 9% of the estimated region-wide doe population. Within HDs 704 and 705, an estimated 1,455 does would be harvested, accounting for 9% of the estimated doe population in those 2 districts. Additionally, due to some hunter shift where they would have otherwise hunted in HDs 700-703, the percentage of the doe population being harvested there will be reduced and the percentage in HDs 704 and 705 will increase.

On average, 40% of 700-20 license holders are successful at harvesting a buck. Approximately 280 bucks in Region 7 are expected to be harvested with the 900-20 archery-only either sex license. Therefore, this would result in an estimated total regional buck harvest of around 3,755, or 29% of the estimated buck portion of the regional population.

Pronghorn Management Guide 4th edition (Autenreith, R.E., et.al, 2006) recommends maintaining a buck:doe ratio of 25:100 to maintain maximum recruitment into a population, with a post-harvest ratio of 20:100 considered biologically "safe". With a pre-season buck:doe ratio of 54:100 and the anticipated harvest of bucks and does under currently available licenses, we expect a post-season buck:doe ratio of 40:100, well above this suggested minimum threshold.

Through public outreach, Regional staff will continue to encourage hunters to take advantage of the flexibility available to them by the region-wide licenses and additional B license, and to focus their efforts in areas where antelope numbers are more robust.



Summary of the either-sex and doe/fawn license quotas, and the estimated Region 7 antelope population from 2006-2019.

4. Provide information related to any weather/habitat factors that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, temperature/precipitation information).

Weather over the last several years has been inconsistent, with 2014, 2018, and 2019 having exceptional moisture and vegetative production. The winters of 2014-15 and 2015-16 were mild with warmer temperatures and long stretches of snow-free conditions. However, there was a state-wide drought in 2017 and portions of the 2017-18 and 2018-19 winters were particularly harsh. Research indicates that snow depth is a significant factor in antelope survival and much of the Region had significant snow cover for an extended period. This caused localized mortality events, primarily in 2017-18. However, in the context of the broader region-wide population, antelope appeared to have fared better than was expected given the harsh conditions over portions of the last 2 winters.

5. Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).

Landowners and locals in the southern portion of Region 7 have indicated antelope numbers are robust, and at times problematic. In the northwest part of the region antelope populations are still rebounding and do not need additional doe/fawn harvest. Sportsmen, guides/outfitters, and landowners that have been contacted to discuss this doe/fawn LPT addition have been in favor of or neutral to the matter.

Submitted by: **John Ensign**
Date: **10/xx/19**

Approved: **10/xx/19**
Regional Supervisor / Date

Literature Cited:

Autenreith, R.E., D. E. Brown, J. Cancino, R.M. Lee, R.A. Ockenfels, B.W. O'Gara, T.M. Pojar, and J.D. Yoakum, eds. 2006. Pronghorn Management Guide 4th edition. Pronghorn Workshop and North Dakota Game & Fish Department, Bismarck , ND. 158pp.